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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/842,741	04/25/2001	Kojiro Hamabe	P/1929-80	7381

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EXAMINER

RAMPURIA, SHARAD K

ART UNIT	PAPER NUMBER
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2683

DATE MAILED: 04/21/2004

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/842,741

Applicant(s)

HAMABE, KOJIRO

Examiner

Sharad Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2,6-8.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Markus, O'Byrne et al., Carter, Vanghi, Corbett et al., Almeida et al., Palmer.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-28 are rejected under 35 U.S.C. 102 (e) as being anticipated by Bonta et al.

1. Regarding claim 1, Bonta disclosed An area designing apparatus for a mobile communication system (abstract), comprising:

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means for placing a plurality of communicating mobile stations corresponding to traffic distribution information; (24a-24c; fig.2; col.3; 48-57)

means for deciding a base station to which each of the mobile stations is radio linked; (col.3; 48-57)

means for calculating a transmission power of a desired wave signal that each base station transmits to each of the mobile stations that are radio linked thereto; (col.5; 42-52)

means for successively selecting one from a plurality of evaluation positions in a state that each of the base stations is transmitting the desired wave signals; and means for calculating a reception power of a desired wave signal that an evaluation mobile station placed at each selected evaluation position receives from the base station that is radio linked thereto and reception powers of interference wave signals that the evaluation mobile station receives from the base station that is radio linked thereto and from each of the other base stations, (col.5; 26-col.6; 10)

wherein communication quality at each evaluation position is evaluated corresponding to the calculated reception power of the desired wave signal and the calculated reception powers of the interference wave signals. (col.5; 17-25)

2. Regarding claim 2, Bonta disclosed The area designing apparatus as set forth in claim 1, wherein a random deviation amount (random lognormal fading distribution data; col.5; 40-46) is added to a propagation loss of a signal transmitted between the evaluation mobile station placed at each evaluation position and each base station, wherein corresponding to the resultant propagation loss, (col.5; 26-52) the reception power of the desired wave signal and the reception

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powers of the interference wave signals are calculated so as to evaluate the communication quality at each evaluation position, and wherein the evaluation of the communication quality is repeated and the ratio that represents the number of evaluation results that do not satisfy a predetermined level is obtained. (col.6; 31-55 & col.7; 34-55)

3. Regarding claim 3, Bonta disclosed The area designing apparatus as set forth in claim 1, wherein the communication quality at each evaluation position in an area that contains some of the plurality of evaluation positions is evaluated, and wherein a ratio that represents the number of evaluation results at the evaluation positions in the area do not satisfy a predetermined level is obtained. (col.5; 53-col.6; 30)

4. Regarding claim 4, Bonta disclosed The area designing apparatus as set forth in claim 1, wherein the evaluation positions are decided so that some of the plurality of evaluation positions are formed in a regular polygon shape. (22; fig.2; col.3; 48-57)

5. Regarding claim 5, Bonta disclosed The area designing apparatus as set forth in claim 1, further comprising: means for displaying the communication quality at each evaluation position with visual information. (16; fig.1; col.2; 66-col.3; 5 & col.3; 48-57)

6. Regarding claim 6, Bonta disclosed The area designing apparatus as set forth in claim 2, further comprising: means for displaying the ratio that represents evaluation results that do not satisfy a predetermined level with the visual information. (col.2; 66-col.3; 31)

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7. Regarding claim 7, Bonta disclosed The area designing apparatus as set forth in claim 1, further comprising: means for inputting (14; fig.1) the traffic distribution information; means for storing (18; fig.1) the input traffic distribution information; and means for out putting (16; fig.1) the visual information. (col.2; 66-col.3; 12)

8. Regarding claim 8, Bonta disclosed An area designing apparatus for a mobile communication system, (abstract) comprising:

means for placing a plurality of communicating mobile stations corresponding to traffic distribution information; (24a-24c; fig.2; col.3; 48-57)

means for deciding a base station to which each of the mobile stations is radio linked; (col.3; 48-57)

means for calculating a transmission power of a desired wave signal that each of the mobile stations transmits to the base station that is radio linked thereto; (col.5; 42-52)

means for successively selecting one from a plurality of evaluation positions in a state that each of the plurality of mobile stations is transmitting the desired wave signal; means for calculating a reception power of a desired wave signal that the base station that is radio linked to an evaluation mobile station placed at each selected evaluation position receives from the evaluation mobile station and reception powers of interference wave signals that the base station that is radio linked to the evaluation mobile station receives from the mobile stations other than the evaluation mobile station, (col.5; 26-col.6; 10)

wherein the communication quality at the evaluation position is evaluated corresponding to the calculated reception power of the desired wave signal and the calculated reception powers of the interference wave signals. (col.5; 17-25)

9. Regarding claim 9, Bonta disclosed The area designing apparatus as set forth in claim 8, wherein a random deviation amount (random lognormal fading distribution data; col.5; 40-46) is added to a propagation loss of a signal transmitted between the evaluation mobile station placed at each evaluation position and each base station, wherein corresponding to the resultant propagation loss, (col.5; 26-52) the reception power of the desired wave signal and the reception powers of the interference wave signals are calculated so as to evaluate the communication quality at each evaluation position, and wherein the evaluation of the communication quality is repeated and the ratio that represents the number of evaluation results that do not satisfy a predetermined level is obtained. (col.6; 31-55 & col.7; 34-55)

10. Regarding claim 10, Bonta disclosed The area designing apparatus as set forth in claim 8, wherein the communication quality at each evaluation position in an area that contains some of the plurality of evaluation positions is evaluated, and wherein a ratio that represents the number of evaluation results at the evaluation positions in the area do not satisfy a predetermined level is obtained. (col.5; 53-col.6; 30)

11. Regarding claim 11, Bonta disclosed The area designing apparatus as set forth in claim 8, wherein the evaluation positions are decided so that some of the plurality of evaluation positions are formed in a regular polygon shape. (22; fig.2; col.3; 48-57)

12. Regarding claim 12, Bonta disclosed The area designing apparatus as set forth in claim 8, further comprising: means for displaying the communication quality at each evaluation position with visual information. (16; fig.1; col.2; 66-col.3; 5 & col.3; 48-57)

13. Regarding claim 13, Bonta disclosed The area designing apparatus as set forth in claim 9, further comprising: means for displaying the ratio that represents evaluation results that do not satisfy a predetermined level with the visual information. (col.2; 66-col.3; 31)

14. Regarding claim 14, Bonta disclosed The area designing apparatus as set forth in claim 8, further comprising: means for inputting (14; fig.1) the traffic distribution information; means for storing (18; fig.1) the input traffic distribution information; and means for outputting (16; fig.1) the visual information. (col.2; 66-col.3; 12)

15. Regarding claim 15, Bonta disclosed An area designing method for a mobile communication system (abstract), comprising steps of:

placing a plurality of communicating mobile stations corresponding to traffic distribution information; (24a-24c; fig.2; col.3; 48-57)

deciding a base station to which each of the mobile stations is radio linked; (col.3; 48-57)

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calculating a transmission power of a desired wave signal that each base station transmits to each of the mobile stations that are radio linked thereto; (col.5; 42-52)

successively selecting one from a plurality of evaluation positions in a state that each of the base stations is transmitting the desired wave signals; and calculating a reception power of a desired wave signal that an evaluation mobile station placed at each selected evaluation position receives from the base station that is radio linked thereto and reception powers of interference wave signals that the evaluation mobile station receives from the base station that is radio linked thereto and from each of the other base stations, (col.5; 26-col.6; 10)

wherein communication quality at each evaluation position is evaluated corresponding to the calculated reception power of the desired wave signal and the calculated reception powers of the interference wave signals. (col.5; 17-25)

16. Regarding claim 16, Bonta disclosed The area designing method as set forth in claim 15, wherein a random deviation amount (random lognormal fading distribution data; col.5; 40-46) is added to a propagation loss of a signal transmitted between the evaluation mobile station placed at each evaluation position and each base station, wherein corresponding to the resultant propagation loss, (col.5; 26-52) the reception power of the desired wave signal and the reception powers of the interference wave signals are calculated so as to evaluate the communication quality at each evaluation position, and wherein the evaluation of the communication quality is repeated and the ratio that represents the number of evaluation results that do not satisfy a predetermined level is obtained. (col.6; 31-55 & col.7; 34-55)

17. Regarding claim 17, Bonta disclosed The area designing method as set forth in claim 15, wherein the communication quality at each evaluation position in an area that contains some of the plurality of evaluation positions is evaluated, and wherein a ratio that represents the number of evaluation results at the evaluation positions in the area do not satisfy a predetermined level is obtained. (col.5; 53-col.6; 30)

18. Regarding claim 18, Bonta disclosed The area designing method as set forth in claim 15, wherein the evaluation positions are decided so that some of the plurality of evaluation positions are formed in a regular polygon shape. (22; fig.2; col.3; 48-57)

19. Regarding claim 19, Bonta disclosed The area designing method as set forth in claim 15, further comprising: a step of displaying the communication quality at each evaluation position with visual information. (16; fig.1; col.2; 66-col.3; 5 & col.3; 48-57)

20. Regarding claim 20, Bonta disclosed The area designing method as set forth in claim 16, further comprising: a step of displaying the ratio that represents evaluation results that do not satisfy a predetermined level with the visual information. (col.2; 66-col.3; 31)

21. Regarding claim 21, Bonta disclosed The area designing method as set forth in claim 15, further comprising steps of: inputting (14; fig.1) the traffic distribution information; storing (18; fig.1) the input traffic distribution information; and outputting (16; fig.1) the visual information. (col.2; 66-col.3; 12)

22. Regarding claim 22, Bonta disclosed An area designing method for a mobile communication system, (abstract) comprising steps of:

placing a plurality of communicating mobile stations corresponding to traffic distribution information; (24a-24c; fig.2; col.3; 48-57)

deciding a base station to which each of the mobile stations is radio linked; (col.3; 48-57)

calculating a transmission power of a desired wave signal that each of the mobile stations transmits to the base station that is radio linked thereto; (col.5; 42-52)

successively selecting one from a plurality of evaluation positions in a state that each of the plurality of mobile stations is transmitting the desired wave signal; calculating a reception power of a desired wave signal that the base station that is radio linked to an evaluation mobile station placed at each selected evaluation position receives from the evaluation mobile station and reception powers of interference wave signals that the base station that is radio linked to the evaluation mobile station receives from the mobile stations other than the evaluation mobile station, (col.5; 26-col.6; 10)

wherein the communication quality at the evaluation position is evaluated corresponding to the calculated reception power of the desired wave signal and the calculated reception powers of the interference wave signals. (col.5; 17-25)

23. Regarding claim 23, Bonta disclosed The area designing method as set forth in claim 22, wherein a random deviation amount (random lognormal fading distribution data; col.5; 40-46) is added to a propagation loss of a signal transmitted between the evaluation mobile station placed

at each evaluation position and each base station, wherein corresponding to the resultant propagation loss, (col.5; 26-52) the reception power of the desired wave signal and the reception powers of the interference wave signals are calculated so as to evaluate the communication quality at each evaluation position, and wherein the evaluation of the communication quality is repeated and the ratio that represents the number of evaluation results that do not satisfy a predetermined level is obtained. (col.6; 31-55 & col.7; 34-55)

24. Regarding claim 24, Bonta disclosed The area designing method as set forth in claim 22, wherein the communication quality at each evaluation position in an area that contains some of the plurality of evaluation positions is evaluated, and wherein a ratio that represents the number of evaluation results at the evaluation positions in the area do not satisfy a predetermined level is obtained. (col.5; 53-col.6; 30)

25. Regarding claim 25, Bonta disclosed The area designing method as set forth in claim 22, wherein the evaluation positions are decided so that some of the plurality of evaluation positions are formed in a regular polygon shape. (22; fig.2; col.3; 48-57)

26. Regarding claim 26, Bonta disclosed The area designing method as set forth in claim 22, further comprising: a step of displaying the communication quality at each evaluation position with visual information. (16; fig.1; col.2; 66-col.3; 5 & col.3; 48-57)

27. Regarding claim 27, Bonta disclosed The area designing method as set forth in claim 23, further comprising: a step of displaying the ratio that represents evaluation results that do not satisfy a predetermined level with the visual information. (col.2; 66-col.3; 31)


28. Regarding claim 28, Bonta disclosed The area designing method as set forth in claim 22, further comprising steps of: inputting (14; fig.1) the traffic distribution information; storing (18; fig.1) the input traffic distribution information; and outputting (16; fig.1) the visual information. (col.2; 66-col.3; 12)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sharad Rampuria whose telephone number is 703-308-4736. The examiner can normally be reached on Mon-Thu. (8:45-6:15) alternate Fri.(8:45-5:15).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Sharad Rampuria
April 14, 2004


WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600